

Downtown Marina Operations and Maintenance Manual

City of Beaufort
Downtown Marina
Operations and Maintenance Manual

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Downtown Marina Operations and Maintenance Manual

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The documents listed below were used in the development of, and must be used in conjunction with, this Operations and Maintenance Manual. It is the Marina Operator's responsibility to update reference materials as codes and standards change.

CURRENT VERSIONS OF THE REFERENCE DOCUMENTS LISTED HAVE BEEN PROVIDED TO THE CITY AS AN ADDENDUM TO THIS DOCUMENT

References

[State of SC Contingency Plan for Spills and Releases](#)

[SC Law Ch. 30-12\(E\) – OCRM Marina Regulations](#)

[SCDHEC Water Quality Classes and Standards](#)

[2017 Clean Marina Guidebook](#)

[Fire Protection Standard for Marinas and Boatyards NFPA 303-16](#)

[Maintenance and Operation: Maintenance of Waterfront Facilities, Unified Facilities Criteria](#)

[Beaufort County Emergency Operations Plan](#)

Operations Documents

[Heavy Weather Plan](#)

[Fire Procedures](#)

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[Mooring Field Rules and Regulations](#)

[Marina Rules and Regulations](#)

[Marina Environmental Policy Statement](#)

[Pumpout Vessel](#)

Maintenance Documents

[Asset Inventory](#)

[Power Pedestals - Manufacturer Instructions](#)

[Bellingham Marine - Manufacturer Instructions](#)

1.0 Introduction/Intent

This Operations and Maintenance manual (O&M) updates the original O&M manual drafted in 1996 and outlines the specific responsibilities of the Operator (Lessee) of the Downtown Marina. The purpose of this document is to establish and define personnel requirements, maintenance procedures, and operating standards in support of marina operations at the Downtown Marina located in Beaufort, SC. This manual is not to be construed as a comprehensive manual on marina operations. It relates specifically to the day-to-day operations of the Downtown Marina, its employees, and/or subcontractors. The scope of this manual includes criteria for the inspection, evaluation, maintenance, and reporting of the waterfront facilities located at the Downtown Marina and must be used in conjunction with the publications listed in Section 1.1 References. This manual must be continually updated as new structures are added to the Downtown Marina or as references and standards change.

Users of this Operations and Maintenance Manual will understand their roles, responsibilities, obligations, and pathways for problem resolution while maintaining the facility in prime condition and operational for years of enjoyable use.

ANY ENCOUNTERED CONDITION THAT AFFECTS LIFE SAFETY AT THE DOWNTOWN MARINA SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE MARINA OPERATOR AND THE CITY. UNSAFE AREAS SHALL BE IMMEDIATELY CORDONED OFF TO PREVENT ACCESS BY ANYONE OTHER THAN AUTHORIZED PERSONNEL. MARINA OPERATIONS WITHIN UNSAFE AREAS SHALL CEASE UNTIL THE UNSAFE CONDITION IS RECTIFIED TO THE CITY'S SATISFACTION. ANY INCIDENT OR INJURY TO TENANTS, MARINA PERSONNEL, OR THE PUBLIC SHALL BE IMMEDIATELY REPORTED TO THE CITY.

1.1 References

The documents listed below must be used in conjunction with this manual. It is the responsibility of the Marina Operator to obtain copies of and familiarize themselves with the listed reference documents. State and Federal documents are often updated, and therefore the most current version of each of these documents must be utilized. If a conflict between references, guidelines, or standards exists, the most stringent guideline shall apply. When in doubt, seek guidance from the City.

1. [State of SC Contingency Plan for Spills and Releases of Oil and Hazardous Substances – SC DHEC](#)
2. [SC Law Ch. 30-12\(E\) – South Carolina Legislature](#)
3. [Water Classifications and Standards - SC Bureau of Water SCDHEC](#)
4. [2017 Clean Marina Guidebook - SCDHEC OCRM](#)
5. [Fire Protection Standard for Marinas and Boatyards, NFPA 303-16 - National Fire Protection Agency](#)
6. [Maintenance and Operation: Maintenance of Waterfront Facilities, Unified Facilities Criteria \(UFC\), UFC 4-150-07, 2012](#)
7. [Beaufort County Emergency Operations Plan](#)

1.2 General Description

The Downtown Marina is a public facility and is located 15 miles north of the Port Royal Sound entrance in the Beaufort River, and the Intracoastal Waterway at Statue Mile 536.2. The physical address of the Marina is 1006 Bay Street Beaufort, SC. The Marina features approximately 100 wet slips that are operational to the public from 8 am to 6 pm in the summer, and 8 am to 5 p.m. from December through February. The Marina accommodates boats up to 130 feet. A graphical depiction of the Downtown Marina is presented in [Figure 1 – Marina Map](#).

The Marina is comprised of the following components and structures:

1.2.1 Ship's Store and Office

The Marina Store and Office are located in the same 1500 SF building approximately 180 ft northeast of the Main Dock. It houses the office of the marina lessee and also sells various retail items, food, and drinks. All pertinent information regarding the operation and maintenance of the marina can be obtained at the Ship's Store.

1.2.2 Bathrooms/Showers/Laundry Building (Restroom)

The Bathrooms, Showers, and Laundry for the marina are housed in the same building as the public restrooms for Henry C. Chambers Waterfront Park. This building is located approximately 50 ft west of the Marina Store and includes public and private men's and women's bathrooms, private showers, and washer/dryer room. The total building area is approximately 1900 SF.

1.2.3 Main Dock

The Main Dock is located directly south of the Restroom and Laundry Facility and consists of floating docks designated A-Dock through G-Dock. The Main Dock is accessed via gangway connected to the seawall at Henry C. Chambers Waterfront Park. A-Dock is 250 ft long by 8 ft wide and provides access to B-Dock through G-Dock and ten other smaller finger docks. B-Dock through E-Dock serve as the long-term tenant portion of the Downtown Marina and extend perpendicular from A-Dock. F-Dock and G-Dock measure a combined 500 ft long by 8 ft wide and serve as the transient and fueling portion of the marina. F-Dock and G-Dock were replaced in 2017 with Bellingham Flotation Systems floating docks. The remaining portions of the Main Dock were manufactured by Sullivan Flotation Systems. The entire dock system is moored by 73, 14-in. square prestressed concrete piles. Each dock segment is comprised of polyethylene-encapsulated foam filled flotation cells within treated pine framing members which support a deck comprised of 2x6 treated pine boards.

In total, the Main Dock provides: 75 slips, (66)220-watt power pedestals and 344 mooring cleats. The pumpout station, fuel dispenser, and Dockmaster's office are located at the south side of the dock, and the portable pumpout boats are docked near the north side.

1.2.4 H-Dock

H-Dock is located to the east of the Main Dock and is accessed by a 4 ft wide by 30 ft long gangway located on the Seawall. This structure was replaced in 2017 with a timber floating dock manufactured by Bellingham Marine. H-Dock measures 136.5 ft long and has eight 5 ft wide by 26'-7" long finger piers. The structure is comprised of polyethylene flotation cells supporting a timber superstructure and deck and is moored by eight, 14-in. prestressed concrete piles. Six, 220-watt power pedestals service H-Dock.

1.2.5 Dinghy Dock

The Dinghy Dock is located at the western extent of the facility and serves as a landing for dinghies using the adjacent mooring field, as well as, a courtesy dock for boaters using the adjacent boat ramp. The Dinghy Dock extends perpendicular from shore and parallel to the boat ramp for an approximate distance of 115 ft. At the end of this leg, the Dinghy Dock extends west, parallel to the shoreline, for a distance of 150 ft. The structure is comprised of polyethylene flotation cells supporting a timber deck and is moored by 13, 14-in. prestressed concrete piles. The decking of the Dinghy Dock was replaced in 2017.

1.2.6 Boat Ramp

The Boat Ramp measures approximately 18 ft wide by 125 ft long and is located between the Dinghy Dock and the Western Seawall. The Boat Ramp is constructed of reinforced concrete.

1.2.7 Mooring Field

The mooring field contains 30 mooring balls. The 16 balls located nearest the marina are for boats of 35 feet or less, while the remaining 14 balls are for boats larger than 35 feet.

1.3 Permits Issued Authorizing Marina and Facilities

The list of U.S. Army Corps of Engineers applicable permits includes:

Original Marina Construction 1976 (Original permit authorization number is unknown)

79-3G-40

Permit to install two new mooring fields - **Status Unknown**

93-3T-274-P

Expansion of Marina for F and G Docks (Transient Docks) - **This work was completed**

Addition of a Day Dock Parallel to Seawall - **Withdrawn**

Permit was Amended to move Day Dock (aka Dinghy Dock) adjacent to Boat Ramp - **This work was completed.**

96-1T-385P

Expansion of Marina and Mooring Field - **Withdrawn**

96-1T-349

Modification of 96-1T-385P to Expand Marina and Mooring Field - **Withdrawn**

2005-1E-140-P

Expansion of Dinghy Dock - **Withdrawn**

2012-0498-1W

Replacement of H-Dock with drive on docks - **Withdrawn**

New float for step-up transformers at Transient Dock - **Withdrawn**

Expansion of Dinghy Dock - **Withdrawn**

40 Mooring Envelopes - **Partially Done (30 installed)**

2015-01625-2IY

Day Dock at Waterfront Park - **This work was completed.**

Copies of these documents are provided as references to this manual and are also on file with the City.

1.4 Personnel Responsibilities

The Downtown Marina representatives responsible for general oversight of operations and maintenance are:

- City of Beaufort (Lessor)
 - Responsible for capital improvements to and major repair or modifications of Downtown Marina infrastructure as stated in the Contract between the City and Lessee.
 - Verifies the Marina Operator's adherence with this Operations and Maintenance Manual.
 - Approves routine repair and maintenance activities.
- Marina Operator (Lessee)
 - Responsible for fulfilling the obligations dictated by the Lease Agreement and Operations and Maintenance Manual with the City of Beaufort, as well as,

overall operation and maintenance of the Downtown Marina. Reports operation and maintenance constraints and conditions to the City of Beaufort. The Marina Operator reports directly to the City.

- Dockmaster
 - The Marina Operator shall designate a qualified individual to serve as Dockmaster. The Dockmaster is responsible for overseeing the day-to-day berthing, mooring, and servicing of vessels at the Downtown Marina. The Dockmaster is responsible for providing daily and monthly inspections of the facility in order to identify conditions affecting operation or maintenance of the facility and reports directly to the Marina Operator.

- Deckhands
 - Assists Dockmaster by providing the manual labor required for day-to-day marina operations. Deckhands assist with the daily inspections of the facility and report directly to the Dockmaster.

2.0 Water Quality Management and Pollution Prevention Strategies

The marina waters are of waterbody class SA which is defined by SCDHEC as tidal saltwaters suitable for primary and secondary contact recreation, crabbing, and fishing, except harvesting of clams, mussels, or oysters for market purposes or human consumption. Class SA waterbodies are also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora. The Downtown Marina currently does not perform water quality testing at its Marina facility. If a water quality monitoring program is required by SCDHEC-OCRM, it will be designed to meet all requirements listed in the SCDHEC - OCRM, Marina/Commercial Dock Operation and Maintenance Manual Requirements. The Downtown Beaufort Marina operates in accordance with applicable sections of the SCDHEC-OCRM's Marina Regulations (R.30-12.E). For more information, refer to applicable reference material.

2.1 Violations Statement

No hazardous material including but not limited to: oil, gasoline, dyes, and waste shall be dumped into the Marina waters. Violations of this statement shall result in the immediate ban from the Marina. If a violation of pertinent State or Federal regulations is noted, the deficiency will be immediately reported to the Marina Lessee and City Staff responsible for marina operations. For minor deviations from the regulations, immediate steps will be taken to correct the deficiency and the appropriate regulatory agencies will be notified of the violation and the actions implemented to correct the violation. If a major violation occurs, the marina will notify and coordinate with the appropriate regulatory agencies to remedy the violation.

2.2 Facilities and Services Relating to Water Quality Management and Pollution Prevention

Restroom facilities are available adjacent to the Ships Store 24 hours a day, 7 days per week. However, separate facilities that include showers and restrooms are locked and are only available to those provided the code for entrance. The Marina facility also has fueling facilities, laundry, and electrical hook-ups. However, boat maintenance and/or repair facilities are not available. Absorbent pads and containment booms are available at the Marina in case of an incidental fuel spill, a leaking boat, or a sunken boat. For more information, refer to applicable reference material.

2.3 Marina Policy Related to Water Quality Management and Pollution Prevention Strategies

The Downtown Beaufort Marina's policy related to water quality management and pollution prevention strategies is intended to conform to SCDHEC-OCRM's Marina Regulations R.30-12.E.6(a). This policy includes prohibiting discharges of oil, gas, or other hydrocarbons, repairs or maintenance resulting in discharges into state/federal waters and discharges of Marine Sanitation Devices (MSD) into state/federal waters. An oil recycling station is located within the garbage enclosure at the west end of the parking lot. For more information regarding pollution prevention strategies, refer to applicable reference material.

2.4 Liveboards

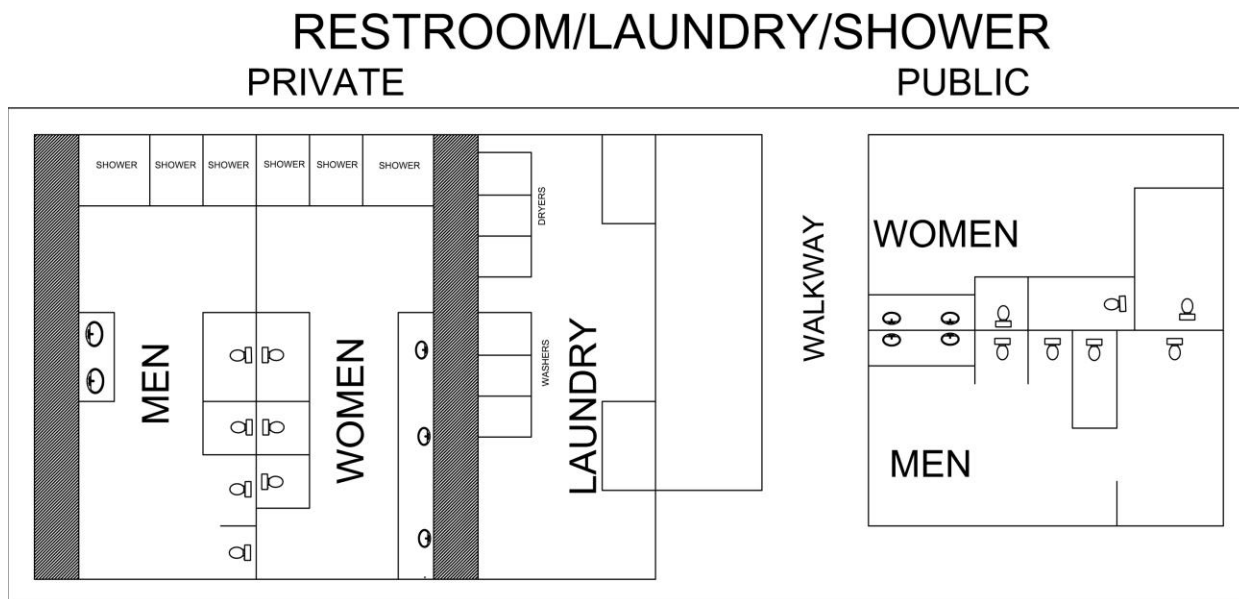
Liveboards are full time occupants of the Marina that lives within the confines of the boat he/she owns. The downtown Marina does allow liveboards. The average number of liveboards present at any given time is approximately ten to twelve.

2.5 Pumpout

The fixed pumpout system is attached to the Dockmasters office and the portable pumpout boat moors near the gangway of the main dock. The pumpout facilities are operated solely by authorized Marina personnel and only during normal operating hours. The waste from the portable system is transferred to the fixed system, and is then transferred to a main sewage collection system. The cost for usage of the system is 5 dollars per use. The Marina Operator is responsible for keeping records of all pumpout operations (hours, usage, etc...) and reporting this information quarterly to SCDHEC as required for reimbursement. The Marina Operator shall provide these records to the City upon request.

2.6 Restrooms, Showers, and Laundry

The men's public restroom contains two urinals, two stalls, and two sinks. The women's public restroom contains three stalls and two sinks. The public restrooms are maintained



by the City. There are two private restrooms, one for men and one for women. The private restrooms are for marina tenants and guests only and are opened via code, which can be

provided by the Marina operator. The men's private restroom contains three two urinals, two stalls, two sinks, and three showers. The women's private restroom contains three stalls, three sinks, and three showers. The laundry room contains three washers and three dryers.

2.7 Contingency Plans for Wastewater Discharge or Spill

Due to the similar densities of sewage and seawater, containing a sewage spill will be essentially impossible. In the event of a spill, DHEC will be informed immediately. Water quality (fecal coliform) monitoring will be initiated to monitor environmental impact and to assess and limit any risks to public health. As well, floating solids will be controlled. For more information, refer to applicable reference material.

2.8 Trash\Litter Management

The Marina has three 55-gallon trashcans, which are emptied into a dumpster operated by the City. Batteries shall never be disposed of at the Marina, and littering is strictly prohibited. Failure to adhere to these guidelines shall result in immediate ban from the premises.

3.0 Fueling System/Facilities and Pollution Prevention Strategies

The Marina Operator is responsible displaying all required fuel dispenser permits.

1. Employees of Downtown Marina will be responsible for the safe and environmentally acceptable servicing of boats at the Marina pumps. Anticipated activities include fueling boats, and related lubricants, assisting with moorings at the docks, etc. Marina employees will assure that the boat(s) are securely moored prior to the initiation of the fueling activities. Downtown Marina employees will have complete control authority, and responsibility of the fueling activities. It shall be the Downtown Beaufort Marina employee responsibility to assure that all requirements specified herein are met. Marina employees have the right and are expected to cease and/or refuse to serve and boat operator or other customer who either refuses to comply with the practices described herein or conducts

him/herself in such a way as to pose a threat to the safe and environmentally acceptable operation of the fuel dock.

2. The Dockmaster shall be responsible for assuring that any and all information necessary for or otherwise influencing the safe and environmentally sound operation of the fuel dock is communicated to all workers.
3. A minimum of one trained employee will be present at the Marina at all times. As traffic conditions necessitate during the summer period, additional staff will be present to assure the safe and prompt service of all boats.
4. In the event of an emergency shutdown, electrical power to the fuel pumps shall be disconnected using the power switch at the fuel pump or in the Ships Store. Electrical power to the pumps will remain off until the emergency has been resolved. Manual cutoff valves will be located at the tank, at the edge of the dock and at the pumps. The valves will be serviced and maintained in accordance with manufacturer's specifications.
5. All relief valves shall be set, operated and maintained in accordance with manufacturer's specifications.

Training and Qualification Program for Personnel

Marina personnel shall be familiar with the provisions, methods and procedures presented in this manual, as well as, all reference material indicated. When new employees are hired, it will be the Dockmasters responsibility to brief each new employee regarding the importance of environmentally sound operations. The Dockmaster shall instruct each new employee regarding the methods and procedures presented in this manual and shall demonstrate the proper use off all equipment, including spill and clean-up equipment. During the initial period of employment, the Dockmaster or his appointed representative shall supervise the new employee to be sure that all procedures described in this report are being followed. Failure of an employee to adhere to the procedures described in this report

shall be grounds for termination. The fuel meter is located near Bay Street and the steel fuel tanks hold 5000 gallons of gasoline and 10,000 gallons of diesel and are located roughly 15 feet from the meter. The galvanized fuel lines run under the parking lot and under the main dock. There are three Bennet dispensers, two for diesel and one for gasoline. The fuel dispensers are operational as long as the Marina is open. In the case of a spill of oil, gasoline and or diesel, the Marina has absorbent pads and booms located on the main dock. The booms are used to surround the spill and then the absorbent pads are thrown into the area of the encircled booms to cleanse the water.

3.1 Pollution Prevention Strategies

Absorbent pads and booms are located on the fueling dock next to the fuel dispensers. Clean-up of spill shall be immediately initiated by trained Marina employees. Used oil and other materials contaminated with petroleum products and/or other hazardous substances will be disposed of at an approved disposal facility. If large quantities of the material are present, a qualified contractor will be contacted for proper disposal of the material. The Downtown Marina will follow the guidance in the document entitled "Contingency Plan for Spills of Oil and Other Hazardous Substances," for any fuel or oil spill response. For more information, refer to applicable reference material.

3.2 Past Water Quality Sampling

No past water quality sampling data is available.

3.3 Contingency Plan if Water Quality Problem is Detected

If future sampling and analysis at the Downtown Beaufort Marina indicates a water quality problem exists in the Marina basin, measures will be taken immediately to determine the source of the problem, as well as the necessary measures to resolve the problem.

3.4 Potable Water Supply System

Potable water is supplied by the City of Beaufort.

4.0 Inspection

The Marina Operator and City are responsible for developing and implementing an inspection program in order to identify any condition that prevents the Downtown Marina from operating in a safe and efficient manner. The following sections provide guidelines for different types of inspections required at the Downtown Marina.

4.1 Routine Inspection

Routine Inspection has the fundamental purpose of providing the information necessary to assess the condition (capacity, safety, and rate of deterioration) of a structure and is a basic function performed in support of normal maintenance of waterfront facilities. The following parameters shall be used when conducting Routine Inspections:

Limit of Inspection

Inspections shall be conducted on all accessible components of all marina structures. Accessible components are defined as those components that are readily accessible without the need for extensive removal of materials, excavation, diving, or material testing.

Level of Inspection

Inspections shall consist of a close visual and tactile examination in order to assess and verify the condition of the structures and materials under investigation.

Frequency of Routine Inspections

DAILY: Daily inspections shall be performed by the Dockmaster with the assistance of the Deckhands, as applicable.

MONTHLY: Marina Operator shall perform monthly inspections with the assistance of the Dockmaster.

JOINT QUARTERLY: Marina Operator, Dockmaster, and City Representatives shall perform a cooperative inspection and facility walkthrough .

4.2 Special Inspection

SPECIAL INSPECTIONS: Inspections not considered routine will be at the discretion of the City. Special Inspections shall be performed by a third party entity designated by the City and shall not be performed by the Marina Operator. These inspections may include but are not limited to:

- following significant storm events
- following vessel collisions
- involve underwater inspection or materials testing
- fire at the marina

The scope, limits, and levels of Special Inspections shall be coordinated between the City and the Marina Operator. Marina Operator is required to advise the City of any conditions that may warrant a Special Inspection.

4.3 Fire Suppression Inspection

Inspection of the fire suppression system shall be conducted annually by a qualified City approved fire suppression expert in accordance with NFPA standards. The results of this testing shall be provided to the City.

4.4 Mooring Field

The inspection of the buoys, pennants, and tackle components that can be readily accessed by marina personnel are required to be inspected a minimum of every 48 hours. An underwater inspection of the mooring components is considered a Special Inspection. The inspection of these components shall be conducted annually by a City approved consultant.

4.5 Routine Inspection Procedures

Routine Inspections shall be conducted by marina personnel using the frequency and procedures specified within this manual. A sample checklist for Routine Inspection has been included in this section of the manual for reference. This checklist or City approved equal shall be used by marina personnel. It must be noted that this checklist may not be inclusive of every asset at the Downtown Marina and that the Marina Operator is

responsible for continually updating inspection checklists in order to include new systems and structures. Marina Operator is required to follow all Manufacturers' written instructions concerning periodic inspection, maintenance, installation, and repair. If there is any deviation between the provided checklist and the manufacturer's instructions, the most stringent condition shall apply.

ANY ENCOUNTERED CONDITION THAT AFFECTS LIFE SAFETY AT THE DOWNTOWN MARINA SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE MARINA OPERATOR AND THE CITY. UNSAFE AREAS SHALL BE IMMEDIATELY CORDONED OFF TO PREVENT ACCESS BY ANYONE OTHER THAN AUTHORIZED PERSONNEL. MARINA OPERATIONS WITHIN UNSAFE AREAS SHALL CEASE UNTIL THE UNSAFE CONDITION IS RECTIFIED TO THE CITY'S SATISFACTION. ANY INCIDENT OR INJURY TO TENANTS, MARINA PERSONNEL, OR THE PUBLIC SHALL BE IMMEDIATELY REPORTED TO THE CITY.

4.6 Inspection Record Keeping

Marina Operator shall maintain a log book of daily, monthly, and quarterly inspections, as well as, special inspections. The records must be provided to the City upon request. A sample checklist for routine floating dock inspections has been provided in the following section.

4.7 Floating Dock Inspection Checklist

FLOATING DOCK INSPECTION CHECKLIST

DECKING AND STRUCTURAL ELEMENTS			
✓	Procedure	Location	Comments/Condition
DECKING			
—	Check for cracked, rotted, loose or worked decking.		
—	Check for loose hardware or protruding hardware		
—	Check for soft spots, dry rot, signs of insect damage		
—	Ascertain the extent of bird droppings		
—	Check for missing, broken, or loose connections; obstructions; and other hazardous conditions		
MOORING CLEATS			
—	Check for breaks, wear, rough edges, missing, or loose hardware		
PILING			
—	Evaluate piling at low water. Check for cracks, spalls, delamination, abrasion, and impact damage		
PILE GUIDES			
—	Check for loose, damaged, missing hardware		
—	Check for extensive corrosion and loss of section		
—	Check rollers and rubbing pads for excessive wear and functionality		
FENDERS/RUB RAILS			
—	Check for loose or missing components		
—	Check for protruding objects that can penetrate vessels		
POWER PEDESTALS			
—	Inspect receptacles and breakers		
—	Check for rust on hardware and cracks in housing		
—	Ensure pedestal is firmly attached to dock		
—	Test functionality of lighting		
GANGWAYS			
—	Ensure smooth operation throughout tide cycle		
—	Check rollers and transition plates for excessive wear		
—	Check utility connections		
UTILITIES			
—	Check for leaks		

Inspection Personnel: _____

Sign: _____

Date: _____

Comment: _____

Follow-Up Action: _____

5.0 Preventative Maintenance and Repair

Preventative Maintenance is defined as: the care and servicing by personnel for the purpose of maintaining equipment and facilities in good operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects. Maintenance is recurrent (day-to-day, periodic, or scheduled) work that is required for the Downtown Marina to operate under its intended purpose.

Repair is the fixing, mending, or replacement of key structural elements or ancillary items in order to ensure a 100 percent safe and operational condition at the Downtown Marina.

The Marina Operator is responsible for implementing a repair and maintenance program that will include the prevention of deterioration and damage, prompt detection of deficiencies, and early accomplishment of maintenance and repairs in order to prevent interruptions to operations or limiting the full use of the Downtown Marina.

5.1 Preventative Maintenance and Repair Procedures

Items requiring Preventative Maintenance are typically identified through Routine Inspections and by referring to Manufacturer's Published Information. Items requiring maintenance or repair as identified during Routine Inspections shall be logged and recorded on the Routine Inspection Checklist, reported to the Marina Operator, the City and addressed on the day identified.

Maintenance items may include, but are not limited to:

- Tightening loose hardware
- Cleaning excessive dirt, grime, and bird droppings using a soft bristle brush and soapy water
- Clearing obstructions and hazardous conditions from walkways
- Applying corrosion inhibiting coatings to metal members
- Applying lubricant to moving parts

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Repair items may include, but are not limited to:

- Replacing damaged, missing, loose hardware (nuts, bolts, screws, brackets).
- Replacement of excessively worn, cracked, soft or damaged decking.
- Repair of structural members exhibiting significant abrasion, wear, damage, or loss of capacity.
- Replacement of pile guide rollers and rubbing pads
- Replacement of pile guide assemblies
- Reattachment or replacement of rubbing boards and rub rails
- Repair or replacement of power pedestals
- Replacement of fuses and breakers
- Repair or replacement of utility lines

Users of this Manual are advised that the maintenance and repair items presented above are not inclusive of every possible scenario that may be encountered at the Downtown Marina. Preventative Maintenance requirements are typically published by manufacturers. It is the responsibility of the Marina Operator to obtain copies of manufacturer published data, updates, and addenda. All manufacturer data shall be kept in a single file or binder in the Ships Store and made available at the City's request. Furthermore, maintenance procedures must be continually updated as new systems and structures are added to the Downtown Marina.

For repair and replacement activities: all materials shall be new, shall match the original installed component, shall match manufacturer's specifications (where applicable), and shall be installed in accordance with industry standard practices or manufacturer's instructions. If there is any doubt, conflict, or concern regarding the previous statement the Marina Operator shall seek guidance from the City of Beaufort.

Repair or replacement of marina components shall be approved in writing by the City prior to implementation.

5.2 Maintenance and Repair Record Keeping

All maintenance and repair activities at the Downtown Marina are to be recorded in a Maintenance and Repair Log. The Marina Operator shall submit copies of Maintenance and Logs to the City prior to the Joint Quarterly Routine Inspection. The Maintenance and Repair Log must be completely filled out and signed. All documents relating to the specific maintenance or repair activity must be attached to the log and provided to the City. These documents include, but are not limited to:

- receipts
- photographs
- warranties
- manufacturer literature

A sample Maintenance and Repair Log is provided on the next page.

5.3 Maintenance and Repair Log

City of Beaufort Downtown Marina Maintenance and Repair Log

Name of Asset: _____ Location: _____

Serial No.: _____

Manufacturer: _____

Description of Maintenance or Repair
Activities:

Follow-up Actions/Remarks:

Documents Attached (circle all that apply):

Photographs	Receipts	Warranties	Other (list below)
-------------	----------	------------	--------------------

Maintenance and Repair

Performed by: _____ Date: _____
Print

Signature

Verified by: _____ Date: _____
Print

Signature

City of Beaufort Use

Received By: _____ Date: _____

Comments/Follow-up: _____

6.0 Asset Inventory

The Asset Inventory is located on the following page and shall be updated by the Marina Operator as new Assets are added or replaced.

Downtown Marina Asset Inventory

Asset	Quantity	Unit	Asset	Quantity	Unit
Main Dock			Mooring Field		
Power Pedestals	66	EA	Mooring Buoys	30	EA
Cleats	344	EA	Boat Landing		
Fire Suppression	1	EA	Concrete	1080	SF
Piles	73	EA	Men's Restroom		
Gangway	1	EA	Urinals	3	EA
Dock Master Cabin	1	EA	Toilets	5	EA
Fuel Pump	3	EA	Showers	3	EA
Deck Boards	15,300	SF	Sinks	4	EA
Pumpout	2	EA	Lights	8	EA
Rubrail	4000	LF	Locks	2	EA
Electrical	1	EA	Hand Dryers	2	EA
H-Dock			Women's Restroom		
Power Pedestals	6	EA	Toilets	6	EA
Cleats	60	EA	Showers	3	EA
Piles	8	EA	Sinks	5	EA
Gangway	1	EA	Lights	8	EA
Deck Boards	1900	SF	Locks	2	EA
Rubrail	670	LF	Hand Dryers	2	EA
Electrical	1	EA	Laundry Room		
Dinghy Dock			Washers	3	EA
Cleats	39	EA	Dryers	3	EA
Piles	12	EA	Ship's Store and Office		
Deck Boards	1512	SF	Floors	1800	SF
Rub Rail	350	LF			

7.0 Conclusion

The Downtown Marina is regarded as a highly valuable asset by the City of Beaufort. For several decades, the marina has been used and enjoyed by local residents, as well as, short-term, and transient boaters. It is the City of Beaufort's goal to provide the means and methods in order to have a world-class marina facility that will be enjoyed by the public for generations to come. This Operations and Maintenance Manual in conjunction with the reference material specified herein provides the guidance necessary to accomplish this goal.

Significant cooperation and coordination between the City of Beaufort and the Marina Operator is critical in order to systematically identify and correct deficiencies that are counter to the City's goals. Many of these deficiencies can be identified (and corrected), thus preventing the undesirable interruption of marina operations, by properly planning and executing a comprehensive inspection, maintenance and repair program.

This Operation and Maintenance Manual must be continually updated as codes and reference material change or as new facilities and components are added to the Downtown Marina. If the guidelines presented throughout this document and reference material are followed, the inspection, maintenance, and repair of the Downtown Marina will become second nature. These actions will provide for smooth and efficient marina operations that will ultimately be a great benefit for the boating public.